Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A method for performing trial screening with a medical device system, the medical device system providing treatment to a patient with a nervous system disorder, the method comprising:

(a) receiving a first input relating to a location of treatment therapy delivery;

(b) receiving a second input about a set of therapy parameters that is associated with a treatment therapy;

(c) administering the treatment therapy in accordance with the first and second inputs; and

(d) receiving a first indication whether the treatment therapy is acceptable to the patient and a second indication whether to utilize the first and second inputs, wherein the second indication is determined by evaluating a criterion, wherein the criterion is selected from a group consisting of a detection frequency of the neurological event, a duration of the neurological event, an intensity of the neurological event, and an electrographic spread of the neurological event.

2. **(Previously Presented)**. The method of claim 1, further comprising:

(e) if the first indication indicates that the treatment therapy is acceptable and if the second indication indicates that the first and second inputs are to be used, applying the treatment therapy at a future point in time.

3. **(Original)** The method of claim 1, wherein the nervous system disorder is selected from the group consisting of a disorder of a central nervous system, a disorder of a peripheral nervous system, a mental health disorder, and a psychiatric disorder.

4. **(Original)** The method of claim 3, wherein the nervous system disorder is selected from the group consisting of epilepsy, Parkinson's disease, essential tremor, dystonia, multiple sclerosis (MS), anxiety, a mood disorder, a sleep disorder, obesity, and anorexia.

5. **(Original)** The method of claim 1, wherein the treatment therapy is selected from the group consisting of electrical stimulation, magnetic stimulation, drug infusion, and brain temperature control.

6. **(Original)** The method of claim 1, wherein the treatment therapy is provided to a location of a body selected from the group consisting of a brain, a vagal nerve, a spinal cord, and a peripheral nerve.

7. **(Original)** The method of claim 1, wherein the medical device system is selected from the group consisting of an external system, a hybrid system, and an implanted system.

8. **(Previously Presented)** The method of claim 2, further comprising:

(f) in response to step (e), if the treatment therapy is not successful, repeating steps (a)-(d).

Claims 9-10 **(Cancelled)**.

11. **(Previously Presented)** The method of claim 1, wherein the evaluating in (d) comprises:

(i) obtaining treatment data during the trial screening session, wherein the treatment therapy is applied;

(ii) obtaining comparison data during a neurological event screening session, wherein the treatment therapy is not applied, and wherein the comparison data correspond to the treatment data;

(iii) deleting a portion of the comparison data corresponding to a blanking interval of the treatment therapy; and

(iv) calculating a difference between the treatment data and the comparison data in order to determine the efficacy of the treatment therapy.

12. **(Original)** A computer-readable medium having computer-executable instructions for performing the steps recited in claim 1.

13. **(Cancelled)**.

14. **(Previously Presented)** A computer-readable medium having computer-executable instructions for performing the steps recited in claim 11~~10~~.

15. **(Currently Amended)** A method for performing neurological event screening with a medical device system, the medical device system providing treatment to a patient with a nervous system disorder, the method comprising ~~the steps of~~:

(a) detecting an occurrence of a neurological event;

(b) identifying a neurological event focus location that is associated with the neurological event;

(c) reporting information about the neurological event focus location to an output device;

(d) identifying a neurological event spread that is associated with the neurological event;

(e) reporting the neurological event spread to the output device.

(f) receiving a first input about a configuration of a treatment delivery unit that is associated with the neurological event screening;

(g) receiving a second input about a set of therapy parameters that is associated with a treatment therapy;

(h) administering the treatment therapy in accordance with the first and second inputs;

(i) receiving a first indication whether the treatment therapy is acceptable to the patient and a second indication whether to utilize the first and second inputs, wherein the second indication is determined by evaluating a criterion; and

(j) if the first indication indicates that the treatment therapy is acceptable and if the second indication indicates that the first and second inputs are to be used, applying the treatment therapy at a future point in time.

16. **(Previously Presented)** The method of claim 15, further comprising:

(k) providing a recommendation for the configuration of a treatment delivery unit and the set of therapy parameters to an output device.

17. **(Original)** A computer-readable medium having computer-executable instructions for performing the steps recited in claim 15.

18. **(Currently Amended)** A medical device system for performing neurological event screening, the medical device system providing treatment therapy to a patient with a nervous system disorder, the medical device system comprising:

a set of monitoring elements that obtains a set of neurological signals, wherein each monitoring element receives a neurological signal;

an output device; and

a processor that is coupled to the at least one monitoring element and to the output device, the processor configured to ~~perform the steps of~~:

(a) detect~~ing~~ an occurrence of a neurological event with a detection algorithm;

(b) use~~using~~ an output from the detection algorithm to identify at least one neurological event focus location that is associated with the neurological event; and

(c) store~~storing~~ the neurological event focus location as stored information.

19. **(Currently Amended)** The medical device system of claim 18, wherein the processor is configured to use the output in ~~step~~ (b) to ~~comprises~~:

(i) determine~~determining~~ a first channel that is associated with an earliest onset of the neurological event, the first channel corresponding to a first neurological signal.

20. **(Currently Amended)** The medical device system of claim 18, wherein the processor is further configured to ~~perform the further steps of~~:

(d) determine~~determining~~ whether to perform algorithm adaptation; and

(e) compute~~computing~~ threshold and time duration constraint settings that are associated with the detection algorithm, in response to ~~step~~ (d).

21. **(Currently Amended)** A medical device system for performing trial screening, the medical device system providing treatment to a patient with a nervous system disorder, the medical device system comprising:

a treatment therapy unit that delivers treatment therapy to the patient;

a set of monitoring elements that obtains a set of neurological signals, wherein each monitoring element receives a neurological signal;

an input device that obtains input information from a user;

an output device that presents output information to the user; and

a processor that is coupled to the treatment therapy unit, the set of monitoring elements, the input device, and the output device, the processor configured to ~~perform the steps of~~:

(a) receive~~receiving~~ a first input relating to a location of treatment therapy delivery ;

(b) receive~~receiving~~ a second input about a set of therapy parameters that is associated with a treatment therapy;

(c) administer~~administering~~ the treatment therapy in accordance with the first and second inputs;

(d) receive~~receiving~~ a first indication whether the treatment therapy is acceptable to the patient and a second indication whether to utilize the first and second inputs, wherein the second indication is determined in accordance with a criterion, wherein the criterion is selected from a group consisting of a detection frequency of the neurological event, a duration of the neurological event, an intensity of the neurological event, and an electrographic spread of the neurological event; and

(e) if the first indication indicates that the treatment therapy is acceptable and if the second indication indicates that the first and second inputs are to be used, apply ~~applying~~ the treatment therapy at a future point in time, wherein the treatment therapy is applied in a closed loop mode or an open loop mode.

22. **(Currently Amended)** A method for performing trial screening with a medical device system, the medical device system providing treatment to a patient with a nervous system disorder, the method comprising the steps of:

(a) receiving a first input relating to a location of treatment therapy delivery;

(b) receiving a second input about a set of therapy parameters that is associated with a treatment therapy;

(c) administering the treatment therapy in accordance with the first and second inputs, wherein the administering of the treatment comprises:

(i) applying the treatment therapy every n^{th} detection cluster;

(d) receiving a first indication whether the treatment therapy is acceptable to the patient and a second indication whether to utilize the first and second inputs, wherein the second indication is in accordance with an evaluation of a criterion, the evaluation comprising:

(i) obtaining treatment data for a first detection cluster, wherein the treatment therapy is applied;

(ii) obtaining comparison data for a second detection cluster, wherein the treatment therapy is not applied, and wherein the comparison data correspond to the treatment data;

(iii) deleting a portion of the comparison data corresponding to a blanking interval of the treatment therapy; and

(iv) calculating a difference between the treatment data and the comparison data in order to determine the efficacy of the treatment therapy; and

(e) if the first indication indicates that the treatment therapy is acceptable and if the second indication indicates that the first and second inputs are to be used, applying the treatment therapy at a future point in time.

23. **(Previously Presented)** The method of claim 22, wherein the nth cluster is at least a 2nd clusters, whereby the treatment therapy is not applied to at least every other cluster.